	Cambridge M.T.	Position.	C^d-O^d.	Distance.	C^d-O^d.	Obs.
1847.	h m	°	°	″	″	
Nov. 3	7 0	51	+0·6	12·6	+1·1	4
26	7 26	45	−1·2	15·9	+0·2	15
1848.						
July 3	16 15	219	+4·1	16·2	+0·4	14
11	15 15	24	+3·5	12·0	−0·4	2
21	15 0	234	−5·8	16·2	−0·5	5
Aug. 31	10 30	225	−1·3	16·6	+0·2	14
Oct. 11	7 50	220	+0·6	16·4	−0·1	6
12	10 10	245	−2·2	9·6	−0·1	3
20	9 54	41	+3·3	15·8	+0·5	11
23	7 50	221	+2·6	16·3	+0·1	10
28	8 0	212	−3·7	11·2	+0·1	3
Nov. 1	7 0	221	−2·8	16·5	−0·7	4

The column headed C^d-O^d contains the differences between the Observed places and those Computed from the following orbit:—

Period $5^d·8752$
Inclination 30°
Ascending Node 300° if the motion is *direct*.

Passage of Ascending Node, Oct. 30·37, 1848, Greenwich M.T.

Mean Distance 16″·3

The mass of *Neptune* corresponding to this distance is $= \frac{1}{19400}$.

EIGHTH SATELLITE OF SATURN (*Hyperion*).

CAMBRIDGE, U.S. Equatoreal. (Professor W. C. Bond.)

Camb. M.S.T.	Distance from Saturn's Centre.	Camb. M.S.T.	Distance from Saturn's Centre.
d	″	d	″
1848. Sept. 19·56	+256	Oct. 21·42	−206
21·52	+220	23·42	−178
22·44	+192	27·34	+ 88
23·38	+145	28·31	+136
28·38	−156	Nov. 1·31	+248
Oct. 13·32	+202	2·30	+198
14·29	+152	3·31	+228
15·40	+ 92	1849. Jan. 12·29	−132
20·31	−187		

In the above table + indicates that the Satellite *follows Saturn;* and − that it *precedes* the Planet.

The following is an approximation to the orbit of *Hyperion*, computed by G. P. Bond:—

Period ..... 21·18 days
Mean Dist. ... 214″
Eccentricity 0·115
Epoch ..... 97° Jan. 1, 1849
Perisaturnium 295°

The plane of the orbit coincides nearly with that of the ring. It probably undergoes very considerable perturbations from the influence of *Titan*.

LIVERPOOL. 20-foot Reflector. (Mr. Lassell.)

1848.	Sept.	21·55	Hyperion	East of	Saturn	234″
		22·41	,,	,,	,,	207
	Oct.	20·35	,,	West	,,	178
		22·44	,,	,,	,,	203
	Nov.	14·36	,,	,,	,,	133
		24·45	,,	,,	,,	202·8

SATELLITES OF URANUS.

LIVERPOOL. (Mr. Lassell.)

			Satellite.	Position.	Obs.	Distance.	Obs.
1848.	Sept.	16·60	II.	200°	est.		
			IV.	195	,,		
			?	340	,,	two diam. of planet.	
		18·53	II.	145·4	3	31″·7	2
			IV.	158·2	2	45·2	2
			?	305	est.	10	est.
	Oct.	27·48	II.	332·9	4	31·05	4
			IV.	178·4	4	41·2	3
	Nov.	4·38	II.	351·4	3	30	est.
			IV.	340	est.	44·5	2
		30·46	II.	351	est.	32·15	3
			IV.	353·3	2	43·43	3
	Dec.	1·47	II.	324·4	2	25·52	2
			IV.	336	2	40·26	3

ECLIPSES OF JUPITER'S SATELLITES.

LIVERPOOL. Equatoreal. (Mr. Hartnup.)

1849.		Imm. h m s	Emer. h m s		Power.
March 5	4th Satell.	10 7 3·5	11 49 30·4	Greenwich M.T.	271
6	2d		11 19 53·9	——	180

" On March 5, while waiting for the emersion of the 4th satellite, I observed the contact and separation of the 2d and 3d satellites. One passed so nearly over the other, that at one time the elongation was only just perceptible.

	Greenwich M.T. h m s		Greenwich M.T. h m s	Power.
Contact	14 42 32·5	Separation	14 52 40·9	271